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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
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ART UNIT	PAPER NUMBER
2626	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/726,102	AGAPI ET AL.	
	Examiner	Art Unit	
	MICHAEL C. COLUCCI	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/20/2008 has been entered.

Response to Arguments

2. Applicant's arguments filed 08/20/2008 have been fully considered but they are not persuasive. However, in view of the amended claims, all previous prior art, with the exception of Ehsani et al. US 20020032564 A1 (hereinafter Ehsani), pursuant to all previous office actions has been withdrawn.

Argument 1 (page 5 paragraph 1):

- "the present invention concerns a method for creating a speech recognition application callflow in which if the user combines pre-built grammars and any new options, the system searches the pre-built grammars for any matches to the new options, searching both valid utterances and associated annotations. If the new option exists in the pre-build grammar, the "new" option simply points to the equivalent grammar

entry. Otherwise, the new option becomes part of a grammar automatically built to hold it, with the entry in the new grammar having the text of the new option as both the recognition string and an associated annotation."

Response to argument 1:

Examiner takes the position that Ehsani et al. US 20020032564 A1 (hereinafter Ehsani) in view of Washio US 20030195739 A1 (hereinafter Washio) in fact teach the amended limitations. Ehsani teaches a system that consists of the following components: (a) a graphical user interface for designing and editing the call flow for a voice application, (b) a network expander that retrieves alternative variants for the user commands specified in the call-flow design from the database along with their probabilities, (c) a linguistic database, (d) an editor, and (e) a compiler that translates the grammar network into a format than can be used by commercial speech recognizers. Call Flow Design: The first step in designing a recognition network for a voice-controlled dialogue system consists of specifying the call flow in such a way as to anticipate the logic of the interaction. The system's graphical user interface allows the designer to specify user requests, system states, and the transitions between these states ([0221-0222]).

Further, Ehsani teaches the ability to handle annotations and sentences/phrases, where in addition to the phrase entries, the database comprises a vocabulary of

lexical items containing objects, locations, proper names, dates, times, etc. that are used to fill the slots in phrase templates such as "how do I get to . . .?" ([0047]).

Furthermore, Ehsani teaches that t he user responses in the call flow design are automatically expanded into recognition grammars. A grammar includes the set of user responses to system prompts that the system can recognize and process accordingly. FIG. 5 shows the type of network that needs to be generated to recognize the user response to the systems prompt "What kind of food do you like to eat?" For each user request, the grammar specifies the set of legitimate variants and supplies an abstract meaning representation (e.g., "request restaurant information") ([0223]).

Additionally, Ehsani teaches that like the grammar design tool, the system provides a graphical interface for call-flow design and a large database of phrases for enabling the grammars to handle natural variations of user input, e.g., different ways of phrasing a request for information ([0236]).

Ehsani also teaches a grammar designer that provides editing functionality at all stages in the design process. Initial call flow designs can be saved, retrieved, and changed in both graphical and text mode. After the network has been expanded, the designer can go back to the initial call flow design and edit the

phrase variants retrieved by the system. At this stage, most of the editing activity will consist of eliminating variants that don't fit the pragmatic context, and of completing phrase templates by accessing the supplemental databases provided by the system or by typing in the template fillers directly. The editor also permits review and modification of the meaning representations automatically supplied by the system ([0226]).

However, Washio has been introduced to strengthen the teachings of Ehsani in order to add new grammar to speech recognition system when a system can not match an input grammar.

Washio teaches that upon receiving the instruction signal for updating the grammar data, the grammar adding and updating part 23 matches the grammar data obtained in the grammar obtaining part 26 with the new-recognition result in the speech newly-recognizing part 21, and determines an unmatched portion as an update portion of the grammar data. Then, the grammar adding and updating part 23 complements the grammar data with the update portion so as to update the grammar data, thereby outputting the updated grammar data to the updated grammar recording part 31 (Washio [0048] & Fig. 1).

Further, Washio teaches a similar process, wherein a grammar update system 2 of the present embodiment includes a speech newly-recognizing part 21 for

obtaining speech data and the like in the IVR system 1, and recognizing the speech data without using the grammar data stored in the update original grammar recording part 15, a new-recognition result determining part 22 for determining whether or not the new-recognition result is acceptable using the grammar data stored in the update original grammar recording part 15, and a grammar adding and updating part 23 for specifying an update portion and adding it to the grammar data so as to update the data (Washio [0038]).

Furthermore, Washio teaches in other words that in the case where it is determined that the new-recognition result cannot be accepted based on the grammar data, the grammar adding and updating part 23 specifies such an unaccepted portion as an update portion, and adds the update portion to the, grammar data stored in the update original grammar recording part 15 so as to update the data (Washio [0041]).

Claim Objections

3. Claim 1 is objected to because of the following informalities: Examiner would like to point out the minor grammatical error, *"individual option as an grammar* (4th limitation of claim 1). Examiner construes *"individual option as an grammar"* as *"individual option as **a** grammar"*. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehsani et al. US 20020032564 A1 (hereinafter Ehsani) in view of Washio US 20030195739 A1 (hereinafter Washio).

Re claim 21, Ehsani teaches a method for creating speech recognition application callflow ([0221-0222]), comprising the steps of:

placing a prompt into a workspace ([0223]) of a graphical user interface for creating the speech recognition application callflow ([0221-0222]);

assigning an individual option and a pre-built grammar to the same prompt ([0226]);

if the individual option is a potential valid match to a recognition phrase or an annotation ([0047]) in the pre-built grammar,

However, Ehsani fails to teach treating the individual option as a valid output of the pre-built grammar; and

if the individual option fails to be a potential valid match to the recognition phrase or the annotation in the pre-built grammar, treating the individual option as an grammar independent from the pre-built grammar.

Washio teaches that upon receiving the instruction signal for updating the grammar data, the grammar adding and updating part 23 matches the grammar data obtained in the grammar obtaining part 26 with the new-recognition result in the speech newly-recognizing part 21, and determines an unmatched portion as an update portion of the grammar data. Then, the grammar adding and updating part 23 complements the grammar data with the update portion so as to update the grammar data, thereby outputting the updated grammar data to the updated grammar recording part 31 (Washio [0048] & Fig. 1).

Further, Washio teaches a similar process, wherein a grammar update system 2 of the present embodiment includes a speech newly-recognizing part 21 for obtaining speech data and the like in the IVR system 1, and recognizing the speech data without using the grammar data stored in the update original grammar recording part 15, a new-recognition result determining part 22 for determining whether or not the new-recognition result is acceptable using the grammar data stored in the update original grammar recording part 15, and a grammar adding and updating part 23 for specifying an update portion and adding it to the grammar data so as to update the data (Washio [0038]).

Furthermore, Washio teaches in other words that in the case where it is determined that the new-recognition result cannot be accepted based on the grammar data, the grammar adding and updating part 23 specifies such an unaccepted portion as an update portion, and adds the update portion to the, grammar data stored in the update original grammar recording part 15 so as to update the data (Washio [0041]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Ehsani to incorporate treating the individual option as a valid output of the pre-built grammar and if the individual option fails to be a potential valid match to the recognition phrase or the annotation in the pre-built grammar, treating the individual option as an grammar independent from the pre-built grammar as taught by Washio to allow for recognizing the speech data without using the grammar data stored in the update original grammar recording part, wherein the new-recognition result determining part determines whether or not the new-recognition result is acceptable using the grammar data stored in the update original grammar recording part, and the grammar adding and updating part for specifying an update portion and adding it to the grammar data actually updates the output data (Washio [0048] & Fig. 1).

Re claim 22, Ehsani teaches the method of Claim 21, wherein the pre-built grammar ([0233], expanding grammars) is selected from a list of pre-built grammars ([0024], plurality of grammars).

Re claim 23, Ehsani fails to teach the method of Claim 22, wherein the individual option is compared with each grammar in the list of pre-built grammars and if there is a match, the individual option points to the matching grammar and if there is no match, the individual option becomes a new grammar.

Washio teaches that upon receiving the instruction signal for updating the grammar data, the grammar adding and updating part 23 matches the grammar data obtained in the grammar obtaining part 26 with the new-recognition result in the speech newly-recognizing part 21, and determines an unmatched portion as an update portion of the grammar data. Then, the grammar adding and updating part 23 complements the grammar data with the update portion so as to update the grammar data, thereby outputting the updated grammar data to the updated grammar recording part 31 (Washio [0048] & Fig. 1).

Further, Washio teaches a similar process, wherein a grammar update system 2 of the present embodiment includes a speech newly-recognizing part 21 for obtaining speech data and the like in the IVR system 1, and recognizing the speech data without using the grammar data stored in the update original grammar recording part 15, a new-recognition result determining part 22 for determining whether or not the new-recognition result is acceptable using the grammar data stored in the update original grammar recording part 15, and a grammar adding and updating part 23 for specifying an update portion and adding it to the grammar data so as to update the data (Washio [0038]).

Furthermore, Washio teaches in other words that in the case where it is determined that the new-recognition result cannot be accepted based on the grammar data, the grammar adding and updating part 23 specifies such an unaccepted portion as an update portion, and adds the update portion to the, grammar data stored in the update original grammar recording part 15 so as to update the data (Washio [0041]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Ehsani to incorporate the individual option is compared with each grammar in the list of pre-built grammars and if there is a match, the individual option points to the matching grammar and if there is no match, the individual option becomes a new grammar as taught by Washio to allow for recognizing the speech data without using the grammar data stored in the update original grammar recording part, wherein the new-recognition result determining part determines whether or not the new-recognition result is acceptable using the grammar data stored in the update original grammar recording part, and the grammar adding and updating part for specifying an update portion and adding it to the grammar data actually updates the output data (Washio [0048] & Fig. 1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Colucci whose telephone number is (571)-270-1847. The examiner can normally be reached on 9:30 am - 6:00 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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